CHAPTER 1:
Why Can't Public Safety Agencies Talk?

What is interoperability?

Interoperability is the ability of public safety service and support providers—law enforcement, firefighters, EMS, emergency management, the public utilities, transportation, and others—to communicate with staff from other responding agencies, to exchange voice and/or data communication on demand and in real time. It is the term that describes how radio communication systems should operate between and among agencies and jurisdictions that respond to common emergencies. It is a common misconception that public safety responders can communicate efficiently and effectively in times of crisis. In many cases, public safety officers do not possess reliable radio communication systems that allow them to talk to their own agencies.

Popular television shows and movies portray public safety personnel as seamlessly coordinated in their communication and response efforts. The reality is quite different. When public safety agencies communicate with one another, it usually occurs through communication centers—radio operators shuffling messages back and forth between agencies—or through commercial cellular services. Neither of these methods of transmitting critical, timely information is effective. Responding to emergency incidents and tactical situations requires reliable, dedicated equipment. Every second counts. The time it takes to relay messages through more than one radio communication system or dial a cell phone can affect outcomes. Busy signals or dead zones should not occur, although inevitably they will. Public safety must have priority access to wireless communication that is available at all times.

Why should public officials care?

The public looks to you—their elected and appointed officials—to provide basic public safety and guidance and management during a crisis. You are responsible for making critical funding decisions using scarce taxpayer dollars. You understand the political dynamics in your area

Equally as critical as interoperability is the need for basic communications within public safety agencies. When the issue of interoperability is raised, public safety officials respond that they are unable to even talk to their own personnel. The first priority must be to provide public safety with mission-critical radio communication systems that provide reliable agency-specific—law enforcement, fire, EMS—communications. (Mission-critical radio communications are those required when life or property is at stake.) As jurisdictions build or upgrade current systems, that priority should be expanded to include the provision of reliable and interoperable local and regional communications, and, ultimately, reliable and interoperable local, State, and Federal communications.

and in the surrounding jurisdictions.

Ultimately, public safety is a core function for governments. Adequate public safety radio communications are essential to executing the public safety function promptly, effectively, and cost efficiently. Understanding the current status of public safety communications systems in your area—its capabilities and limitations and plans for upgrading or replacing those systems—is critical. If your public safety agencies cannot communicate directly with one another to coordinate life-saving activities, inevitably some lives may be lost.

What is the role of public officials?

Creating interoperability requires leadership, planning, and the development of partnerships among disparate groups at the local, State, and Federal level. Not only do governments at each of these levels have responsibility for the protection of lives and property, each expends substantial resources in an effort to meet these obligations. Without a collaborative approach to interoperability, new investments in equipment and infrastructure can actually make the problem worse by creating a "we just bought new equipment, that's their problem" situation. Interoperability is everyone's problem.

The Nation is experiencing a changing public safety landscape. Budget problems have driven governments to leverage scarce resources. Homeland security needs have broadened public safety's mandate to include responses to bioterrorism and cyberterrorism. The health community has become more prominent in the public's eye as fear of West Nile virus, anthrax attacks, and the specter of smallpox grows. Citizens expect the public sector to function like a business—consistent and effective customer service, everywhere and at any time. Ultimately, the public expects their lives and property to be protected by all governments—local, State, or Federal—without distinction as to who responds to their needs. The public also expects governments to work smoothly and efficiently with the private sector when necessary.

Although the roles and responsibilities of public safety agencies are overlapping and at times unclear, it is clear that many public safety responses require effective coordination and communication among different agencies and levels of government. A high profile incident—a bombing, plane crash, natural disaster, or lost or kidnapped child—tests the ability of all government and public safety organizations to

The [terrorist attack of the] Pentagon demonstrates in a very public way how critically important communications capabilities are for public safety agencies. Imagine the challenge of 50 different local, State, and Federal public safety agencies responding at the Pentagon—900 different radio users, operating on multiple radio systems, and attempting to communicate with one another.

The Pentagon report found that the majority of local public safety responders at the scene experienced little difficulty establishing interoperable communications during the initial response. Due to existing mutual aid agreements, most of the first responders had [common] radio frequencies preprogrammed into their portable radio equipment and had frequently used the capability for other mutual aid responses.

Robert E. Lee, Jr., PSWN [Public Safety Wireless Network] Program Manager.

Why Can't They Just Use Cell Phones?

U nfortunately it's not that simple. Although public safety personnel regularly use cellular phones, personal digital assistants (PDAs), and other commercial wireless devices and services, these devices are currently not sufficiently suited for public safety mission-critical communications during critical incidents.

Public safety officials cannot depend on commercial systems that can be overloaded and unavailable. Experience has shown such systems are often the most unreliable during critical incidents when public demand overwhelms the systems.

Public safety officials have unique and demanding communications requirements. Optimal public safety radio communication systems require:

·   Dedicated channels and priority access that is available at all times to handle unexpected emergencies.

·   Reliable one-to-many broadcast capability, a feature not generally available in cellular systems.

·   Highly reliable and redundant networks that are engineered and maintained to withstand natural disasters and other emergencies.

·   The best possible coverage within a given geographic area, with a minimum of dead zones.

·   And, unique equipment designed for quick response in emergency situations—dialing, waiting for call connection, and busy signals are unacceptable during critical events when seconds can mean the difference between life and death.

mount a well-coordinated response. The emergency response to the 9/11 terrorist attacks in New York City and on the Pentagon in Arlington, Virginia, vividly demonstrated that effective communication is an essential tool for those who protect life and property, regardless of who responds.
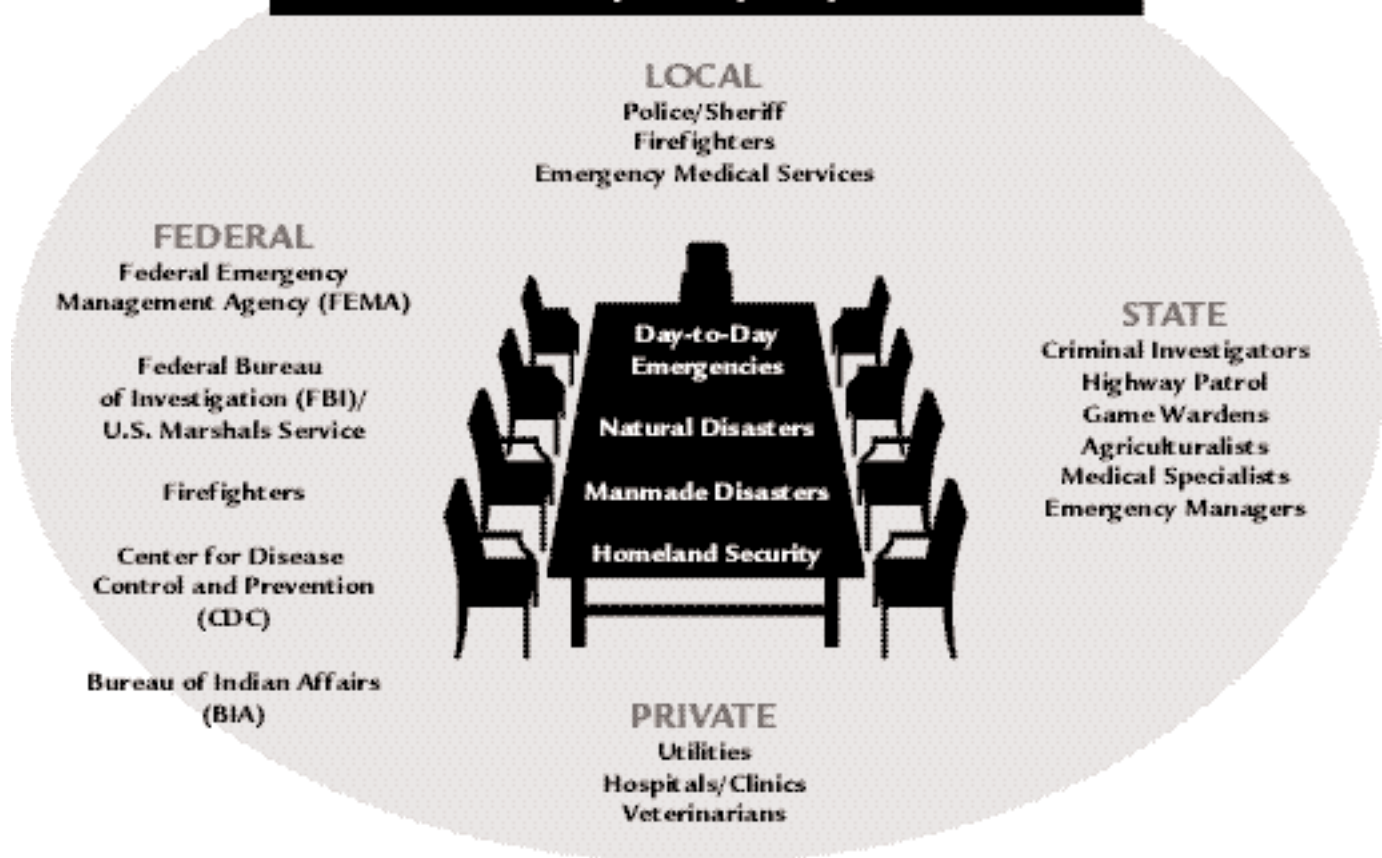
Local communities supply the majority of first responders and maintain local infrastructure. Additionally, local communities take advantage of resources such as firefighters and emergency medical services from nearby communities. But the community's first responders cannot respond in a vacuum. From manmade and natural disasters to unique situations such as anthrax or fires on Federal land, there are times when local communities require State and Federal resources to respond effectively.

*Is this issue
a.) national,
b.) State,
c.) regional,
d.) local, or
e.) all of the above?*

The answer:
e.) All of the above.
Interoperability is an issue that affects every level of government and requires public officials to work together at all levels. Achieving interoperability is difficult work. Interoperability, almost by definition, must include local, State, regional, and national partnerships and input. Getting this tough job done requires partnership and leadership at all levels by people who are committed to the task and who can get and keep the right stakeholders at the table.

Who Is Public Safety?

According to definitions from the Public Safety Wireless Advisory Committee (PSWAC), *public safety service providers* perform emergency first response missions to protect and preserve life, property, and natural resources and to serve the public welfare through local, State, or Federal governments as prescribed by law. *Public safety support providers* include those whose primary mission might not fall within the classic public safety definition, but who may provide vital support to the general public and/or the public safety official. Law enforcement, fire, and EMS fit the first category, while transportation or public utility workers fit the second. Public safety service providers also include non-governmental organizations that perform public safety functions on behalf of the government. For example, a number of local governments contract with private groups for emergency medical services.

Public Safety: Everybody's Business

LOCAL
Police/Sheriff
Firefighters
Emergency Medical Services

FEDERAL
Federal Emergency
Management Agency (FEMA)

Federal Bureau
of Investigation (FBI)/
U.S. Marshals Service

Firefighters

Center for Disease
Control and Prevention
(CDC)

Bureau of Indian Affairs
(BIA)

Day-to-Day
Emergencies

Natural Disasters

Manmade Disasters

Homeland Security

STATE
Criminal Investigators
Highway Patrol
Game Wardens
Agriculturalists
Medical Specialists
Emergency Managers

PRIVATE
Utilities
Hospitals/Clinics
Veterinarians

*This list is not inclusive of the many agencies that support public safety; it is a representative sample
of the different levels of government and types of agencies, public and private, that support public safety.*

Federal agencies support a number of agents within a State, many distributed in local communities, and numerous Federal agencies send staff—from firefighters to FEMA agents—into communities when trouble strikes. Their ability to communicate with local first responders and State agencies is critical to a successful response. State agencies also have a number of agents who operate within local communities, and numerous State agencies send staff such as criminal investigators or social workers into communities when trouble strikes. Their ability to communicate with local first responders and Federal agencies is critical to a successful response.

Public safety relies on many segments of private industry. First respon-

ders rely on both public and private utilities to restore critical infrastructure such as electricity and telephone service, and on the gas companies to suppress leaks or control explosions. Local, State, and Federal agencies look to both public and private hospitals, clinics, and veterinarians to carry out public safety policy, including public outreach and first response. Homeland security activities have also created new requirements for diverse private industries such as transportation centers and suppliers of explosives and fertilizer. To effectively respond to emergencies, all levels of government and industry must plan for interoperability—the ability to be in voice contact and exchange data among all emergency responders—from the outset.

State and local governments must take the lead and collaboratively formulate an interoperability architecture that provides a roadmap for all to follow. Since the transition time for all emergency responders to become interoperable may be considerable, a statewide interoperability plan and/or set of standards that can accommodate short- and long-term solutions may be beneficial. Many States, including Indiana, North Carolina, and South Dakota have successfully implemented such architectures.

There are multiple benefits to collaborative planning, but it is difficult work. Stakeholders need to anticipate and respect each other's roles and responsibilities, while recognizing that they all have a common mission—the protection of lives and property.

In short, there is a need for public officials at all levels of government to:

·   Understand the importance of interoperability;
·   Be able to effectively communicate the benefits of interoperability
    to the public;
·   Understand the political and institutional barriers within the public
    safety community that can impede interoperability;
·   Facilitate collaborative planning among local, State, and Federal
    government agencies;
·   Encourage the development of flexible and open architectures and
    standards; and
·   Support funding for public safety agencies that work to achieve
    interoperability within an agreed-upon plan.

In today's challenging world, from community safety to homeland security, effective public safety responses require that all governments work hand-in-hand for the protection of our citizens and their property.